Potential Soviet dollar earnings from the export of basic commodities and materials to the U.S.

As discussed with Mr. Herbert Block, ERA/DRS, the U.S. Department of Commerce is undoubtedly better qualified to provide information on this subject, however, the following comments may be of interest:

While the USSR has adequate resources to support its proposal in Mr. Khrushchev's letter to President Eisenhower to export manganese and chrome ores to the U.S., the U.S. market is unlikely to be willing to absorb sizable quantities--particularly if long-term commitments are involved--in view of the existing state of relations between the U.S. and the USSR. Before World War II the U.S. received 30 percent of Soviet exports of manganese ore. In 1948 imports into the U.S. from the USSR were equal to 25 percent of the U.S. requirements for manganese ore and to 42 percent of the U.S. supply of metallurgical grade chromite.

When the USSR withdrew from the world market, U.S. consumers developed sources of supply elsewhere. As a result of the development of manganese ore deposits in Brazil by two U.S. steel firms, Brazil has become the second largest source of manganese imports for the U.S. India, Mexico, Cuba, and the Belgian Congo also have become important sources of manganese imports since 1948, as shown in Table I. The principal suppliers of chrome ore to the U.S. are now the Philippines, Turkey, Union of South Africa, and Rhodesia-Nyasaland, as shown in Table 2.

There would seem to be little likelihood that the USSR could, in the near future, export significant quantities of ferroalloys to the U.S. Currently Soviet total exports of ferroalloys are estimated at 30,000 to 35,000 short tons of which approximately 55 percent is ferromanganese, 35 percent is ferrochrome, and most of the remainder is ferrosilicon. The U.S. is an importer of these and other ferroalloys--obtained largely from Canada, West Europe, and Japan. However, U.S. consumers are unlikely to be interested in disrupting their present sources of supply in favor of the USSR, even if the Soviet Union were in a position to supply large quantities of these materials.

It is believed that there would not be any substantial importation into the U.S. from the USSR of solid fuels (including nuclear fuels,) petroleum, or electric power. This estimation is not affected by any assumption with respect to import duties. The only dollar income likely to accrue to the USSR might result from an expanded production of the turbo-drill here with possible increased royalty payments to the USSR.

Basic commodities and materials which the Soviets would most likely be interested in obtaining from the U.S.

The USSR does not import U.S. agricultural commodities. There have been few authoritative references to any desire on the part of the USSR

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to import U.S. agricultural commodities; however, Soviet Ambassador Menshikov was reported to have expressed informally an interest in such imports.

The Soviets recognize the necessity to expand their consumption of some agricultural products. It is unquestionable that they could use U.S. feed grains and livestock products, and possible tobacco and cotton. However, the Soviet leaders have committed themselves to programs for greatly expanding the production of grain, livestock products and cotton in the next several years.

An indication of those chemicals which the USSR might be interested in importing from the US can be obtained from recent import data for the USSR. Total Soviet imports of chemicals were valued at 335 million rubles ($84 million) in 1956, exclusive of rubber (Table 3). Basic chemicals, materials for plastics production, paint and lacquer materials, and photographic materials accounted for the bulk of imports. The USSR also imported 500 million rubles ($125 million) of rubber and rubber products, of which natural rubber accounted for 439 million rubles and synthetic rubber 56 million rubles. Soviet imports of chemicals from the U.S. were negligible in 1956.

The major groups of chemicals which the USSR probably would be most interested in buying from the U.S. are those which will be required to support the projected large increases in synthetics production during 1959-65. These chemicals include materials for plastics production and dyes. The USSR might also be interested in a variety of other chemicals ranging from basic industrial chemicals to chemical reagents. No meaningful estimate of what the total value might amount to can be made but it probably would be substantial. A figure in excess of $10 million would not be inconceivable.

The recent Soviet trade proposal included equipment for the manufacture of pipe and gas lines among the items the USSR would be interested in obtaining from the U.S. In addition to such equipment, there is evidence that other types of equipment for the iron and steel industry would be of interest to the USSR. Members of a Soviet delegation to the U.S. recently made inquiry concerning the possibility of purchasing the complete equipment for four or five taconite-type mines and plants that could have involved an expenditure of $1 billion.

USSR petroleum reserves are more than adequate for her own needs and no importation of petroleum from the US is likely. There might be a small exchange of USSR oil, ex the Black Sea, for Western Europe for deliveries of US or Middle East dollar oil to the Soviet Far East on the basis of convenience or laid down cost. Oil field equipment in the USSR is believed to be adequate for exploitation of their reserves. Imports from the US are not likely with the possible exception of drill bits.

A potential market for certain specialized types of modern refining equipment probably exists in the USSR. It is possible that such equipment and particularly catalytic conversion processes (cracking, reforming, etc.) is necessary to keep pace with the potential rapid expansion of crude oil output and the planned growth of the petro-chemical industry in the USSR. Because the US is a leader in the development and manufacture of such equipment, the US might be the logical supplier. Pipeline construction capacity for both oil and gas appears to be limited in the USSR and there would be a sizeable potential for Soviet purchases both of pipe and of accessory pumping and control equipment.

While the USSR produces a coal tonnage equal to the US and has vast reserves under development, the USSR has a serious shortage of true coking coal and very high production costs, particularly in the industrialized western part of the country. It is conceivable that the USSR might import limited quantities of good coking coal to improve and expand the present coking coal blends being used in the steel industry in the Western USSR.

The USSR capacity in coal mining equipment appears to be adequate. Imports in any quantity are unlikely.

USSR capacity in the production of major generating equipment appears to be adequate to maintain the growth of the system. Imports are deemed unlikely. Likewise the capacity for construction of high tension transmission systems appears to be adequate and imports are unlikely.

Any large increase in local distribution systems could tax the transformer capacity and to meet such a temporary expansion of demand might lead to the importation of part of the many small transformers which would be needed.

The USSR might be interested in obtaining copper and industrial diamonds from the US, but it is impossible to provide any quantitative figures on the amounts of either commodity which the USSR might take. Although USSR imports of copper from the Free World were 60,000 metric tons in 1957, it is questionable whether the USSR would purchase this amount from the US alone.

Consequences of extensive U.S. exportation to the USSR of equipment and technology.

The Soviets use considerable amounts of grain and potatoes in the production of industrial alcohol (food raw material equivalent to more than 1.7 million tons of grain used in 1957) as well as large amounts of edible fats and oils in industry (600 to 700 thousand tons used in 1956). They have stated their intention to reduce the industrial use of food products.

The expansion of the production of synthetic fibers could permit an increased consumption of fibers, increased exports of fibers, or increased production of food products from the areas potentially releasable from the production of wool and cotton.

One of the major growth problems of the Soviet chemical industry, one that must be solved if the Seven-Year Plan (1959-65) for chemicals is to be fulfilled, is the procurement of chemical equipment, particularly equipment for the production of plastics and synthetic fibers. In view of the weakness of the domestic chemical equipment industry and of the limited possibilities of obtaining equipment elsewhere in the Bloc, it has been estimated that fulfillment of the 1965 goals for plastics, synthetic fibers and synthetic rubber will depend, in part, on the success the USSR has in importing equipment from the West. There seems to be little doubt that a denial of U.S. equipment and technology particularly in the field of petrochemicals would retard the growth of the Soviet chemical industry.

With respect to economic and military significance of the planned increases in the production of chemicals, particularly synthetics, the following is quoted from a recently published CSM:

> "The new plan for synthetics was apparently motivated in part by a desire to increase the production of consumer goods, and this motivation was given a great deal of publicity. This publicity tends to obscure the fact that synthetics have wide application in heavy industry and the defense industries. The emphasis on consumer uses may have been intended in part to soften any reluctance of the West to provide equipment and technology for the planned expansion."
>
> "The increased production of chemical fibers and plastics in the USSR will permit a considerable increase in the production of such consumer items as clothes and shoes. In addition, the greater reliance on petroleum sources of raw materials should provide an increase in the availability of certain agricultural products, such as grains, potatoes and fats, which now go to produce synthetic alcohol, soap and other products."
>
> "A substantial portion of the increased production of synthetics, however, will go into industrial and military use. Khrushchev stressed the role of synthetics in lowering costs of production, and emphasized their use in replacing non-ferrous metals. In addition, there are many recent examples of the Soviet use of synthetics in strategic items. Half the measuring instruments aboard Sputnik III are reportedly made of synthetic materials. The Soviet TU-104 passenger plane has 120,000 parts made of plastic and rubber or combinations of these with other materials."

Soviet basic commodities and materials which might be of interest to U.S. Industry for prototype or technological reasons.

It is possible that the U.S. could make use of some Soviet seeds and plant material. One of the U.S. agricultural delegations hopes to obtain materials of this type.

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There are no particular Soviet commodities or items of equipment for use in the iron and steel industry that are likely to be made available for purchase and are of special interest, from the standpoint of their intelligence value, for either prototype or technological reasons.

The U.S. is now experimenting with Russian built turbodrills for use in the U.S. petroleum industry. There is reason to believe that such drills may prove to be a useful addition to U.S. petroleum production equipment if suitable drill bits can be developed. Neither the U.S. nor the USSR have developed satisfactory bits for the turbodrill.

There are no other Russian commodities or equipment related to the fuels and power industries which the U.S. would like to have for prototype or technological reasons.

It is conceivable, that the acquisition of samples of rare metals, powdered metals, certain super purity metals, nonferrous alloys of titanium or tantalum, or cermet might be of interest to U.S. research groups.

Basic commodities and materials which the USSR has exported or which appear to be in surplus in the USSR.

The Soviets export cotton, grain, lumber and other forest products, flax, and small amounts of other agricultural products.

Total Soviet exports of chemicals amounted to about 309 million rubles (approximately $77 million) in 1956, exclusive of rubber and rubber products (Table 4). Coke chemicals and fertilizers accounted for about seven-tenths of the total value. The USSR also exported 172 million rubles ($43 million) worth of rubber and rubber products in 1956, about half the value of which was accounted for by natural rubber, one-fourth by synthetic rubber and one-fourth by tires. It is probable that the pattern of exports in 1957 was quite similar.

Exports of chemicals to the U.S. in 1956 amounted to about $11 million. This consisted almost exclusively of coke chemicals, chiefly benzol and naphthalene. Benzol shipments amounted to 100 thousand tons, valued at 31 million rubles ($8 million). Exports of benzol to the U.S. fell to about 60 thousand tons in 1957, most likely the result of a decline in U.S. requirements.

With respect to the possibility of increased Soviet exports of chemicals to the U.S., the USSR would most likely have exportable surpluses in the fertilizer and coke chemical groups. Potassium salts was the only item in the chemicals category mentioned by Khrushchev in his letter to President Eisenhower.

The Soviet Union has large reserves of potassium. Production of potassium fertilizers (mainly potassium chloride) in 1956 was over 2 million tons (42 percent K_2O basis) and production by 1965 probably will be on the order of 4 to 6 million tons. In 1956, 107 thousand tons, were exported

chiefly to Finland. Exports in 1956 were more than double the 46 thousand tons exported in 1955. The USSR signed a trade agreement to supply Japan with 50 to 100 thousand tons* in 1958. Prior to 1958, Soviet exports of potassium fertilizers to Japan were small or zero. Imports of potassium fertilizers into the USSR declined from 47 thousand tons in 1955 to 5 thousand tons in 1956. The above information indicates a rising exportable surplus of potassium salts. It would appear likely that the USSR could export sizable quantities of potassium chloride to the U.S. without additional research any estimate of the total is conjectural but 100 thousand tons ($2.5 million) or more might be currently available and by 1965 the total might reach 500 thousand tons ($125 million) annually.

Sizable exports of apatile concentrates (to the U.S.) might be possible. The USSR has large reserves of apatile and is a major exporter. More than half of Soviet exports go to Bloc countries.

Benzol is currently in surplus supply in the USSR. Production in 1956 is estimated to have been 370 thousand tons of which 139 thousand tons, or about one-third, were exported. The U.S. purchased 100 thousand tons, in 1956 and 60 thousand tons in 1957. Soviet benzol production, which is largely derived from coke, is estimated to be increasing at a rate of less than 10 percent per year, while domestic requirements (for the production of synthetic organic chemicals) are probably rising at a much more rapid rate. It would appear, doubtful, therefore, that any substantial increase in Soviet exports to the U.S. over the 1956 level of 100 thousand tons is possible. The long-run trend of Soviet exports of benzol should be downward.

Significant increases in exports of such items as naphthalene might be possible. U.S. imports of naphthalene from the USSR increased from 1 thousand tons in 1956 to 6 thousand tons in 1957. The pattern of Soviet trade is to export naphthalene and to import phtenalic anhydride, a chemical which is produced from naphthalene.

While a moderate increase in Soviet exports of chemicals to the US should be feasible any dramatic increase seems unlikely. Even assuming sizable exports of potassium fertilizers and a return to the 1956 level of benzol exports, an increase of more than $15 million in the near future appear doubtful.

In the proposal concerning the possibilities for increased trade between the U.S. and the USSR the Soviet Union listed manganese and chrome ores and ferroalloys as commodities the USSR could export to the U.S. These are commodities which the USSR now exports--to the Free World and to Bloc countries--and which the U.S. imports in large quantities.

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* Reported as 50 thousand tons but K_2O content not given. Probably 100 percent K_2O basis.

There is little doubt that the USSR could implement its proposal to export manganese and chrome ores. The Soviet Union has large reserves of each and is believed to have the capability of increasing considerably both the production and export of these commodities. In 1957 the USSR is estimated to have produced 3.5 million short tons of manganese ore and about 960,000 short tons of chromite. Exports in that year are estimated at 900,000 short tons of manganese ore and 270,000 short tons of chromite. Shipments to Free World countries included 447,000 tons of manganese ore and 189,000 tons of chromite in 1957.

Soviet resources are believed to be capable of supporting an expansion in exports to 1.25 to 1.5 million tons of manganese ore and to 450,000 to 550,000 short tons of chromite within the next few years. Thus, shipments could be made to the U.S. without disrupting the present pattern of Soviet exports shown in Tables 5 and 6.

The USSR has continued to export crude oil and petroleum products in increasing quantities since 1954. Table 7 summarizes the imports and exports of crude oil and products by the USSR in 1957.

In 1963, the USSR may export as much as 30 million tons of crude oil and products, divided approximately equally between other Bloc countries and the Free World. In the same year the USSR may import 8 million tons of crude and products from the EurSats.

It is known that the Soviets supplied most of the equipment for the new refinery at LANCHOW, CHINA. Although the Bloc has offered and/or supplied a variety of production and refinery equipment to Free World countries it is believed that much of such equipment actually originated in Rumania, Czechoslovakia, and Hungary rather than in the USSR.

The USSR became a net exporter in 1957, when total exports of coal and coke were about 7 million tons, valued at about $150 million. Over 60 percent of the total exports - comprised primarily of hard coal (anthracite and bituminous) and coke - was destined for the EurSats. Coal exports to the Free World of bituminous coal and coke, which are in relatively short supply in the USSR and the Bloc, represented less than 10 percent of total coal exports.

The USSR may export as much as 9 million tons of coal and coke by 1963. Although the Free World share may represent as much as 60 percent of total exports in 1963, such share will again be composed essentially of anthracite. The supply of bituminous coal and coke in the USSR is expected to continue to be critical through 1963.

No substantial quantities of power, as such, are exported. Heavy generating equipment has been supplied to the Satellite areas. However, most of the generating equipment offered in the Free World, by the Bloc, is of smaller sizes and is believed to originate in the Satellites.

In 1957 the Soviets exported, among other nonferrous items, aluminum, tin, gold, antimony, lead, platinum, zinc, magnesium, and asbestos to the Free World. It is presumed that these commodities also will be available for export to the Free World in 1958. The 1957 tin exports were probably of Chinese origin. In 1957, exports of aluminum were about 30,000 metric tons valued at $17 million; and tin exports were about 10,000 metric tons at $21 million.

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Table 1

U.S. Imports of Manganese Ore (35% or more Mn) By Countries of Origin
1948, 1956, 1957

Thousand Short Tons

	1948 1/	1956 2/	1957 2/
India	315	651	669
Brazil	160	237	664
Union of South Africa	283	261	224
Mexico	54	183	218
Ghana	218	266	194
Cuba	33	218	152
Belgian Congo	3	155	132
Morocco	Negl.	69	43
Angola	2	17	33
Chile	10	20	28
Portuguese Asia	—	3	19
Turkey	—	4	13
USSR	304	—	—
Other Countries	11	32	103
Total Imports	1,473	2,138	2,492

1. U.S. Bureau of Mines, Minerals Yearbook 1949, p. 753, U
2. American Iron and Steel Institute, Annual Statistical Report, p. 115, U

[redacted]

[redacted]

Table 2

U.S. Imports of Chromite,
By Country of Origin, 1948 and 1956

Thousand Short Tons

	1948 1/	1956 2/
USSR	394	—
Union of South Africa	293	449
Turkey	254	528
Philippines	236	678
Cuba	164	52
Southern Rhodesia	126	359
New Caledonia	46	49
Yugoslavia	13	16
Sierra Leone (British West Africa)	8	2
Malta, Gozo, Cyprus	5	—
Brazil	2	1
Guatemala	1	1
Canada	Negl.	—
Greece	—	2
India	—	31
Japan	—	Negl.
Pakistan	—	7
Total	1,542	2,175

1. U.S. Bureau of Mines, Minerals Yearbook 1949, p. 240, U

2. U.S. Bureau of Mines, Preprint from Minerals Yearbook 1956, Chromium, p. 11,U

[redacted]

[redacted]

Table 3

Soviet Imports of Chemicals, 1956 a/ b/

Item	Thousand Metric Tons	Value Million Rubles	Value Percent Distribution
Caustic soda	68.6	19.0	5.7
Soda ash	143.0	21.0	6.3
Sodium sulfide	21.2	12.2	3.6
Calcium carbide	67.3	24.0	7.2
Alcohols and aldehydes	—	53.4 c/	15.9
Ethyl alcohol	57.5	19.6	
Paraldehyde	40.4	27.8	
Materials for plastics production	—	44.7 c/	13.3
Phthalic anhydride	6.2	10.2	
Polyvinyl chloride resins	10.2	19.9	
Dibutylphthalate	0.1	1.9	
Plasticizers	0.8	3.8	
Phenol	2.0	2.5	
Bakelite powders	1.1	2.2	
Dyes, paints and lacquer materials	—	53.5	16.0
Photographic materials	—	47.3	14.1
Rosin	24.4	15.2	4.5
Insecticides	—	17.3	5.1
Other chemicals	—	27.7	8.3
Total	—	335.3	100.0

a. Ministry of Foreign Trade USSR, Vneshnyaya torgovlya SSSR za 1956 god (International Trade of the USSR in 1956), Moscow, 1958. U.
b. Does not include rubber and rubber products.
c. Complete breakdown of category not shown.

[redacted]

[redacted]

Table 4

Soviet Exports of Chemicals, 1956 a/ b/

Item	Thousand Metric Tons	Value Million Rubles	Value Percent Distribution
Coke chemicals	470.7	93.2 c/	30.1
Benzol	139.1	42.7	
Naphthalene	29.4	13.1	
Coal-tar pitch	232.9	19.5	
Fertilizers and insecticides	—	120.8 c/	39.0
Apatite concentrates	1,123.8	63.1	
Nitrogen fertilizers	112.9	33.3	
Potassium salts	107.1	9.9	
Insecticides	—	3.9	
Dyes, paints, tanning materials	—	27.1	8.8
Wood chemicals	21.3	13.6	4.4
Other chemicals	—	54.6	17.7
Total	—	309.4	100.0

a. Ministry of Foreign Trade USSR, Vneshnyaya torgovlya SSSR za 1956 god (International Trade of the USSR in 1956), Moscow, 1958. U.
b. Does not include rubber and rubber products.
c. Complete breakdown of category not shown.

[redacted]

[redacted]

Table 5

USSR Exports of Manganese Ore, By Countries of Destination, 1956 and 1957

Thousand Short Tons

	1956	1957 *
Czechoslovakia	140	135
East Germany	165	203
Poland	314	194
Albania	7	1
Belgium-Luxemburg	99	—
France	103	138
Italy	33	5
Japan	26	33
Netherlands	11	11
Norway	33	33
Sweden	12	16
United Kingdom	162	171
West Germany	28	11
Yugoslavia	29	16
Austria	—	6
Canada	—	7
Total	1,162	980

* Preliminary

[redacted]

[redacted]

Table 6

USSR Exports of Chrome Ore, By Country of Destination, 1956 and 1957

Thousand Short Tons

	1956	1957 *
Czechoslovakia	2	NA
East Germany	6	6
Poland	12	42
China	7	NA
France	75	55
Italy	6	—
Japan	17	31
Norway	22	22
Sweden	2	50
West Germany	16	—
Pakistan	6	—
Misc	3	3
Canada	—	22
United Kingdom	—	6
Total	174	270

* Preliminary

[redacted]

[redacted]

Table 7

USSR Exports and Imports of Petroleum, 1957

	Quantity (000 metric tons)	Value a/ (million $ US)
Exports from USSR		
To Bloc - Crude	2,196	37.2
Products b/	3,221	113.9
Total	5,417	151.1
To Free World c/		
Crude	1,918	32.5
Products d/	4,216	112.1
Total	6,134	144.6
Imports to USSR		
From Bloc - Crude	171	2.9
Products e/	5,478	179.9
Total	5,649	182.8
From Free World	None	None

a. Based on average unit prices for Middle East Crude FOB Persian Gulf, and US Gulf Coast petroleum products.

b. Exports of products to other Bloc countries were composed essentially of kerosine 42%, gasoline 28%, and gas oil 16%.

c. The US did not engage in any foreign trade in petroleum with the USSR.

d. Exports of products to the Free World countries were composed essentially of residuals 45%, gas oil 37%, and gasoline 10%.

e. Imports of products from other Bloc countries were composed essentially of kerosine 43%, gasoline 28%, and gas oil 17%.

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